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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,271	10/31/2003	Dennis M. News	YOR920030500US1	9194
48150 7590 07/09/2008 MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817				
EXAMINER HARRIS, GARY D				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
07/09/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/697,271

Applicant(s)

NEWNS, DENNIS M.

Examiner

GARY D. HARRIS

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 6-16, 19 and 20 is/are pending in the application.
4a) Of the above claim(s) 10-15 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1, 6-9, 16, 19 and 20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SI-08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Request for Continued Examination

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/23/08 has been entered.

Response to Arguments

Applicant's arguments filed 6/23/2008 have been fully considered but they are not persuasive. Applicant argues that the present invention utilizes ferroelectric bits. However ferroelectric bits are not claimed. Applicant argues although the materials and layered structure are the same, the ferroelectric memory structure are different based on Applicant has amended claim 1 with the new limitation of having a charge migration rate less than 10^{-10} seconds. However, there is no way for the examiner to determine the charge migration rate of a material as facilities are not available to the examiner. Given the examiner sees no clear manner in which to relate the charge migration to the ferroelectric data layer, and the PTO does not have means to provide a measurement, this appears to be the only criteria the examiner can apply to the claimed values. It has been held that where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the burden of proof is shifted to applicant to show that prior art products do not necessarily or

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inherently possess characteristics of claimed products where the rejection is based on inherency under 35 USC §102 or on prima facie obviousness under 35 USC §103, jointly or alternatively. *In re Best, Bolton, and Shaw*, 195 USPQ 430. (CCPA 1977). Lacking any clear determinable correspondence or evidence to the contrary and ferroelectric data layer of the claimed layered structure may be expected to provide a charge migration time values as claimed.

Applicant argues that the storage medium comprising a ferroelectric data layer, metallic underlayer and layer comprising silicon is not disclosed. However, as currently claimed, claim 1 would read on any iron based material having a metallic underlayer with a silicon (oxide, nitride or something that had been sand blasted) in the top layer.

For convenience the rejection is substantially repeated below:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6-9 & 16, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramesh et al. US 6,642,539.

As to Claim 1 & 16 Ramesh et al. '539 discloses a memory (storage medium) and method of obtaining a barrier layer from a conductive material (metallic underlayer) with ferroelectric memory cells (Col. 9, Line 14-23) as illustrated in figure 8. Ramesh et al. '539 discloses a metallic barrier layer (Layer 70) in contact with a Silicon layer (layer 72) and STNVO layer (layer 63).

Additionally, Ramesh et al. '539 discloses a total resistance of the barrier decreases with the barrier thickness and with the area of the barrier as it relates to desired switching time. But, does not disclose charge migration rate of the ferroelectric data layer. Claim 1 seems to be identical, except that the prior art is silent as to the inherent characteristics.

Ramesh refers to materials that can be made electrically leaky depending on the thickness of the material in bulk (Col. 10, Line 63-67), which would be similar to applicants charge migration rate. These properties are inherent in physical properties including charge migration because the applicants and the inventors teach virtually identical structures with similar materials. The physical properties of similar materials will inherently be similar. The burden of proof is shifted to the applicant to show the prior art properties are different from those claimed. See *In re Fitzgerald*, 619 F. 2d 67, 205 USPQ 594 (CCPA 1980).

As to Claim 6, 9, 16 & 19, Ramesh et al. '539 discloses the use of doped perovskite (Col. 6, Line 10-36) and discloses the importance of the barrier layer thickness as it relates to the total resistance (Col. 10, Line 13-23). It would be obvious

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to one skilled in the art to optimize the thickness in order to change the total resistance in a given layer. The patentability of a product is independent of how it was made. Ex parte Jungfer 18 USPQ 1796, 1800 (BPAI 1991); Bristol-Myers Co. v. U.S. International Trade Commission 15 USPQ 2d 1258 (Fed. Cir. 1989). The burden is on applicants to show product differences in product by process claims. In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). See MPEP 2113.

As to Claim 7, 20 Ramesh et al. '539 discloses the use of SrRuO_3 results in a conductive oxide that bonds well with substrate (Col. 8, Line 49-64).

As to Claim 8, Ramesh et al. '539 the use of PZT and SBT (Col. 3, Line 45-65).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GARY D. HARRIS whose telephone number is (571)272-6508. The examiner can normally be reached on 8AM - 5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith D. Hendricks can be reached on 571-272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gary D. Harris/
Examiner, Art Unit 1794

/Holly Rickman/
Primary Examiner, Art Unit 1794

Application Number**Application/Control No.**

10/697,271

Examiner

GARY D. HARRIS

**Applicant(s)/Patent under
Reexamination**

NEWS, DENNIS M.

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